



Photoelectric sensors W27-3 Ex, Photoelectric proximity sensor, energetic

WTE27X-3P1861



Model Name > [WTE27X-3P1861](#)
Part No. > [1066386](#)



Illustration may differ

At a glance

- Classification: EX II 3G EX nA op is IIB T4 Gc X, EX II 3D EX tc IIB T135°C Dc IP67 X according to Directive 94/9/EC (ATEX)
- Corresponds to category 3D/3G
- Conform to standards and ready-to-install: Sensor and additional protective housing (stainless steel 1.4301)
- Resistant to ambient light, optical reflections, and crosstalk from other photoelectric devices

Your benefits

- Ready-to-install sensors including metal housing conform with the 3G/3D category for explosive zones (ATEX)
- Less downtime due to ASIC (application-specific integrated circuit) chip technology by SICK
- Resistant to ambient light, optical reflections, and immune to crosstalk from other photoelectric devices, reducing false detection



Features

Sensor/detection principle:	Photoelectric proximity sensor, energetic
Dimensions (W x H x D):	31.4 mm x 112.3 mm x 70.4 mm
Housing design (light emission):	Rectangular
Sensing range max.:	20 mm ... 400 mm ¹⁾
Type of light:	Red light
Light source:	PinPoint LED ²⁾
Adjustment:	Potentiometer
Light spot size (distance):	Ø 15 mm (400 mm)

¹⁾ Object with 90 % reflectance (referred to standard white, DIN 5033) ²⁾ Average service life of 100,000 h at T_A = +25 °C

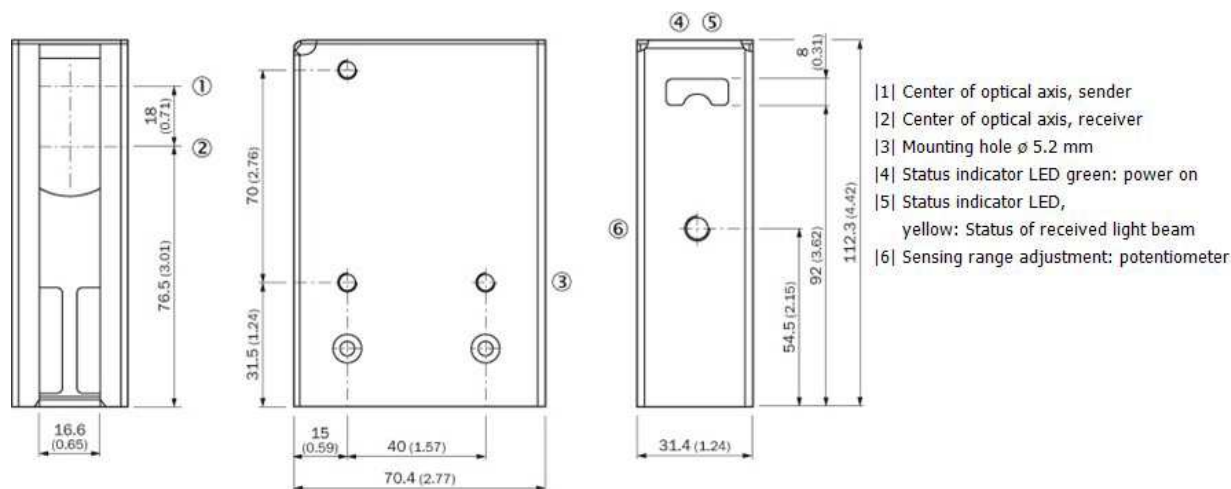
Mechanics/electronics

Supply voltage:	10 V DC ... 30 V DC ¹⁾
Ripple:	≤ 5 Vpp ²⁾
Power consumption:	≤ 35 mA ³⁾
Output type:	PNP
Output function:	Complementary
Switching mode:	Light/dark switching
Output current I _{max} :	≤ 100 mA
Response time:	≤ 1.5 ms ⁴⁾

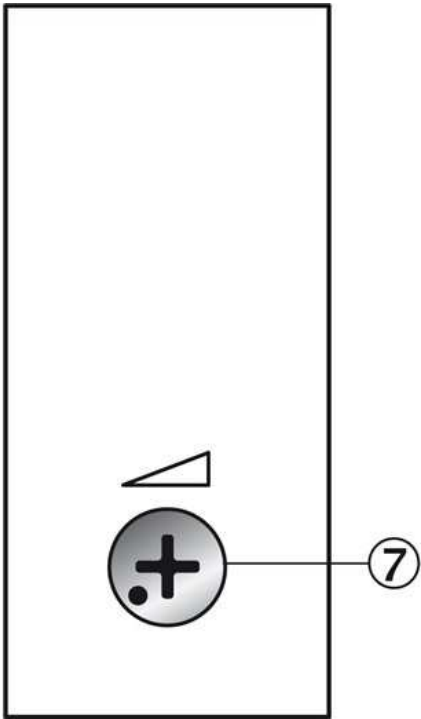
Switching frequency:	350 Hz ⁵⁾
Electrical connection:	Cable, 4-wire, 10 m ⁶⁾
Cable material:	PVC
Circuit protection:::	A, B, C ⁷⁾ 8) 9)
Protection class:	II ¹⁰⁾
Weight:	750 g
Housing material:	ABS, Stainless steel V2A (1.4301), Plastic
Optics material:	PMMA
Enclosure rating:	IP 67
ATEX marking:	EX II 3G EX nA op is IIB T4 Gc X EX II 3D EX tc IIIB T135°C Dc
Hazardous area category:	3D, 3G
Ambient operating temperature:	-20 °C ... +50 °C
Ambient storage temperature:	-40 °C ... +75 °C
Signal voltage PNP HIGH/LOW:	Approx. VS - 2.5 V/0 V

1) Limit values, operation in short-circuit protected network max. 8 A 2) May not exceed or fall short of V_S tolerances 3) Without load 4) Signal transit time with resistive load 5) With light/dark ratio 1:1 6) Do not bend below 0 °C 7) $A = V_S$ connections reverse-polarity protected 8) B = inputs and output reverse-polarity protected 9) C = interference suppression 10) Reference voltage: 50 V DC

Dimensional drawing

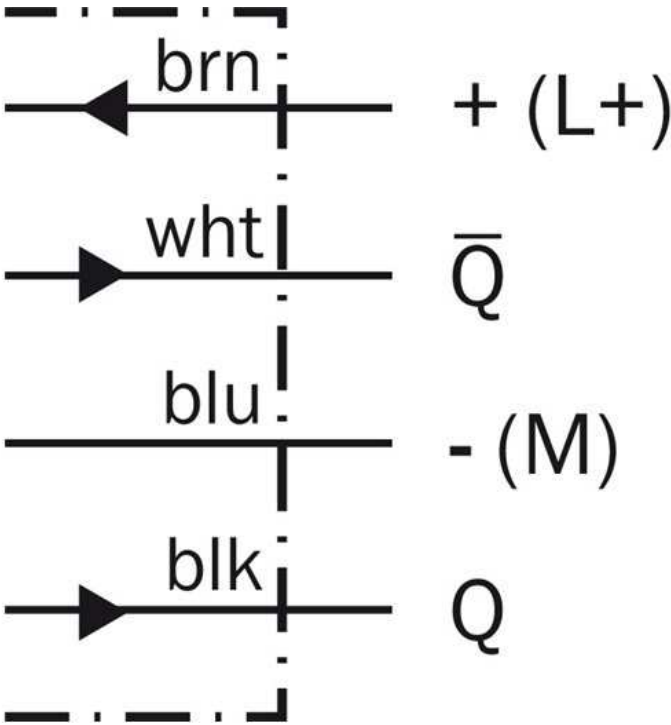


Adjustments possible

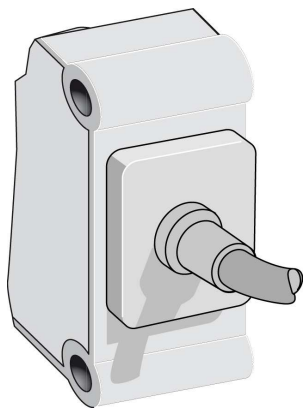


[7] Sensing range adjustment: potentiometer

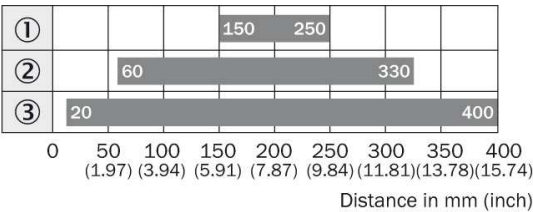
Connection diagram



Connection type



Sensing range diagram



- Sensing range
- ① Sensing range on black, 6 % remission
 - ② Sensing range on gray, 18 % remission
 - ③ Sensing range on white, 90 % remission

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